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### Deposited in DRO:

07 September 2017

### Version of attached file:

Accepted Version

### Peer-review status of attached file:

Peer-reviewed

### Citation for published item:

Minbashian, A. and Beckmann, N. and Wood, R.E. (2018) 'Emotional intelligence and individual differences in affective processes underlying task-contingent conscientiousness.', *Journal of organizational behavior.*, 39 (9). pp. 1182-1196.

### Further information on publisher's website:

<https://doi.org/10.1002/job.2233>

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**Emotional Intelligence and Individual Differences in  
Affective Processes Underlying Task-Contingent  
Conscientiousness**

Journal:	<i>Journal of Organizational Behavior</i>
Manuscript ID	JOB-16-0624.R1
Wiley - Manuscript type:	Special Issue Article
Keywords:	Personality dynamics, cognitive-affective personality system, task-contingent conscientiousness, affect, emotional intelligence

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**Emotional Intelligence and Individual Differences in Affective Processes Underlying  
Task-Contingent Conscientiousness**

**Keywords:** Personality dynamics, cognitive-affective personality system, task-contingent  
conscientiousness, affect, emotional intelligence

### Abstract

Organisational researchers have recently begun to focus on the more dynamic aspects of personality in the workplace. The present study examines individual differences in the affective processes that underlie one such dynamic construct, task-contingent conscientiousness. Using experience sampling data collected over three weeks from 201 managers, we show: (a) that individuals differ substantially from each other in the paths that connect task demand, positive and negative affect, and conscientious behaviour; (b) that these individual differences cohere to define person types or classes that represent meaningful differences in the extent to which task-contingent conscientiousness is mediated affectively; and, (c) that emotional intelligence increases the likelihood of membership in classes that are characterised by affectively mediated effects. Theoretical implications of the findings are discussed with reference to the Cognitive-Affective Personality System model (Mischel & Shoda, 1995), research on the consequences of affect in the workplace, and the literature on emotional intelligence. Practical applications are suggested for managers who wish to use personality assessment for developmental purposes, especially in relation to facilitating behavioural change.

**Emotional Intelligence and Individual Differences in Affective Processes Underlying  
Task-Contingent Conscientiousness**

Although the study of personality in organisations has traditionally focused on relatively fixed personality traits such as the Big Five (e.g., Barrick, Mount, & Judge, 2001), recent approaches to personality research have increasingly emphasised the dynamic aspects of individuals. In a seminal paper, Mischel and Shoda (1995) presented their Cognitive-Affective Personality System (CAPS) model, which proposed that individuals could be characterized not only by their traits (or typical response tendencies) but also in terms of stable and systematic patterns in the way their responses vary across different situations. Fleeson (2007) showed that this dynamic aspect of personality could be operationalised as *contingent units*—regression slopes that assess the extent to which behavioural, affective and cognitive responses vary within a given person as a function of changes in situational characteristics. Minbashian, Wood, and Beckmann (2010) applied a contingent approach to the study of conscientiousness at work. They found significant and stable differences between people in the extent to which conscientious behaviour is contingent on the demands of tasks encountered at work, a construct that was labelled *task-contingent conscientiousness*.

The present paper contributes to this literature by examining individual differences in the affective processes that underlie task-contingent conscientiousness. The paper seeks to make several contributions. First, we derive and test hypotheses that are key to the viability of the CAPS model for the study of personality in the workplace; namely, that there are individual differences in the underlying mediating psychological processes that link work task demands to behavioural responses, and that these differences cohere into distinct personality types that share common patterns in their mediating processes. Second, our findings help to explicate the task-contingent conscientiousness construct by clarifying the

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4 role of affect in contributing to individual differences in the construct. Third, we examine the  
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6 effect of emotional intelligence (conceptualised as a knowledge structure) on individual  
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8 differences in the mediating processes that underlie task-contingent conscientiousness.  
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10 Finally, from a practical perspective, we illustrate how our findings can be used as input into  
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12 interventions that aid individuals to better regulate conscientious behaviour at work.  
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16 In the section that follows we outline the CAPS model and the construct of task-  
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18 contingent conscientiousness. We then argue that affect is a key mediating process through  
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20 which task demand leads to conscientious behaviour, and that individuals will differ from  
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22 each other in the extent to which affect mediates this link. Third, we attempt to explain why  
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24 individuals vary in the mediating role of affect by proposing emotional intelligence (as an  
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26 indicator of emotional knowledge) as an antecedent of the types of mediating patterns  
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28 individuals develop. We test our hypotheses using experience sampling data collected from  
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30 managers over a three-week period at work.  
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### 33 34 **Cognitive-Affective Personality System Model and Task-Contingent Conscientiousness** 35

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37 As described by the CAPS model (Mischel & Shoda, 1995) personality can be  
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39 conceptualised as a system of connected cognitive and affective processing units that mediate  
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41 the effects of situational cues on behavioural responses. That is, for a given individual,  
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43 exposure to a particular situational cue is thought to activate various mental representations  
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45 that include specific thoughts, feelings, goals, strategies, and other psychological processes,  
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47 which in turn activate behavioural responses to the situational cue. Within this model,  
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49 individuals are assumed to differ stably: (a) in the extent to which they attend to particular  
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51 situational cues, (b) in the specific mental representations that are activated by those cues,  
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53 and, (c) in the interconnections of the activated mental representations with each other and  
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55 with behavioural responses. Such differences manifest in terms of stable individual  
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differences in situation-response contingencies. Consequently, an implication of the CAPS model is that *situationally-contingent units of personality*—individual differences in the contingency of behaviour on situational cues—represent an important aspect of personality that should be assessed in addition to trait descriptions of personality.

Situationally-contingent units of personality have only recently started to receive attention in the organisational literature (e.g., Huang & Ryan, 2011; Judge, Simon, Hurst, & Kelley, 2014). Task-contingent conscientiousness (TCC; Minbashian et al., 2010) represents one such unit. TCC refers to the extent to which conscientious behaviour (defined below) is contingent on task demands. The term TCC can be used to refer to an individual difference variable or to an individual’s level on this variable (in the same way that the term extraversion can describe a variable or an individual). In the latter sense TCC describes the dynamics that occur within a person across time, whereas in the former sense it describes stable individual differences in such dynamics. Although the majority of individuals display positive levels of TCC (i.e., higher levels of conscientious behaviour on demanding tasks than on less demanding tasks), the extent to which this occurs varies greatly across people, such that some individuals are highly sensitive to task demands whereas others display little or no contingency between the level of task demand and their level of conscientious behaviour. Such individual differences have been demonstrated in work contexts among managers (Minbashian et al., 2010) and customer service employees (Huang & Ryan, 2011).

TCC can be distinguished from conscientious behaviour itself. Conscientious behaviour (or state conscientiousness) refers to the expression of conscientiousness (i.e., its content) at a *given moment in time* (see Fleeson, 2007). The content of conscientiousness includes a broad array of motivational tendencies that describe how individuals approach and complete tasks (e.g., working hard, being efficient and systematic, showing self-discipline

and task focus, see Costa & McCrae, 1992; Saucier, 1994). Consequently, conscientious behaviour overlaps with other momentary motivational constructs from the organisational literature, such as work motivation (e.g., Seo, Feldman Barrett, & Bartunek, 2004) and task effort (e.g., Van Eerde & Thierry, 1996). Moreover, as conscientious behaviour at a given point in time is influenced by factors outside the person (e.g., situational cues) it is best considered as varying within-individuals, rather than a stable aspect of personality. In contrast, the contingency of conscientious behaviour on task demands (i.e., TCC) is relatively stable within a person but varies across individuals (Minbashian et al., 2010; Sherman, Rauthmann, Brown, Serfass, & Bell Jones, 2015) and hence meets the consistency requirements of being a personality construct (see Fleeson & Nofle, 2008).

Similarly, TCC can be distinguished from trait conscientiousness and other established personality traits. Unlike trait conscientiousness (which describes individual differences in the general tendency to behave conscientiously across situations), TCC captures a dynamic aspect of personality (i.e., individual differences in the dynamics of conscientiousness across situations). Empirically, TCC has been shown to vary independently of trait conscientiousness (Huang & Bramble, 2016; Minbashian et al., 2010) and other traits such as self-monitoring (Huang & Ryan, 2011). In terms of their proposed antecedents, trait conscientiousness has been associated with differences in brain structures (e.g., DeYoung, Hirsh, Shane, Papademetris, Rajeevan, & Gray, 2010), whereas TCC mainly reflects underlying knowledge structures that are acquired over time (see Minbashian et al., 2010). With respect to outcomes, TCC predicts measures of adaptive performance (Minbashian et al., 2010) and learning transfer (Huang & Bramble, 2016) over and above the effects of trait conscientiousness. Consequently, assessing TCC is likely to be useful in aiding personnel selection decisions for jobs that require learning and adaptability.



Beyond its predictive benefits, TCC can be used to understand the processes underlying an individual’s conscientious behaviour, and hence to facilitate behavioural change and development in ways that are not possible by simply assessing an individual’s level of trait conscientiousness. For example, knowing that one has scored low on a measure of trait conscientiousness provides little guidance in relation to the actions required to remedy this, as the assessment itself does not inform about what causes low conscientiousness within the individual. In contrast, contingent units such as TCC explicitly represent the situational triggers that influence the individual’s response and therefore provide insight into how one might deal with low levels of the attribute. For example, knowing that ones conscientiousness is hampered by or insensitive to task demand, one can potentially increase conscientious behaviour by developing self-regulation strategies that promote conscientious behaviour in the presence of demanding tasks. We provide an illustration of this application of TCC in the practical implications section, and this serves as an additional contribution of the present study beyond those outlined immediately below.

The present study extends previous work on task-contingent conscientiousness by Minbashian et al. (2010) and others (e.g., Huang & Bramble, 2016; Huang & Ryan, 2011) in several ways. First, although the previous research has established TCC as a substantive construct that is independent of trait conscientiousness, little is known about the mediating processes that underlie it, and that contribute to individual differences in the construct. This is particularly important as the CAPS model conceptualises situationally-contingent units of personality (and the associated individual differences) as deriving from the underlying mediating processes (see Mischel & Shoda, 1995). The present study contributes to this issue by examining the role of affect in: (a) mediating the within-person relationship between task demand and conscientious behaviour, and (b) contributing to individual differences in TCC.

Second, a key proposition of the CAPS model that to our knowledge has not been previously examined with respect to TCC, or indeed within the organisational literature, is that subtypes of individuals will emerge “who share a common organization of relations among mediating units in the processing of certain situational cues” (Mischel, Mendoza-Denton, & Shoda, 2002, p.53). That is, the CAPS model asserts that personality types can be defined based on common networks of inter-related cognitive-affective units. The delineation of such types is important as it allows one “to make specific predictions about how certain subtypes of individuals are likely to think, feel, and behave in certain kinds of situations” (Mischel et al., 2002, p.53). We explore the presence, number, and nature of such types for the processing dynamics that underlie TCC.

Third, the present study tests the claim that the individual differences in the mediating processes that underlie task-contingent conscientiousness are related to knowledge structures. In doing so, we conceptualise scales from Mayer, Salovey, and Caruso’s (2002) emotional intelligence test (MSCEIT) as indices of an individual’s emotional knowledge and demonstrate how differences between high and low scores on the MSCEIT map on to differences in underlying affective processes experienced at work. Consequently our study provides a point of integration between the dynamic personality literature and the literature on emotional intelligence.

Finally, note that although we could have focussed on situational-contingencies associated with other Big Five constructs (e.g., Judge et al., 2014), our focus on conscientiousness is guided by the importance of this construct in the workplace. Conscientiousness is the strongest Big Five predictor of job performance and its effect generalises across occupations (Barrick et al., 2001). Similarly, we could have focussed on mediating processes other than affect, though we chose to focus on affect as the primary

mediating mechanism. Mischel and Shoda (1995) called “special attention to affects as key aspects of individual differences in social information processing that need to be incorporated as units of analysis” within the CAPS model (p.253). On the other hand, individual differences in affective processes have long been associated with physiological systems that correspond to the Neuroticism and Extraversion factors of the Big Five (e.g., Depue & Collins, 1999; Gomez & Cooper, 2008). We believe that demonstrating the effect of knowledge structures on affective processes (over and above the effects of such Big Five factors) provides a strong test of the CAPS model. Next, we present an argument for two mediating affective pathways underlying task-contingent conscientiousness, and then discuss individual differences in such processes.

**Affect as a Mediator of Task-Contingent Conscientiousness**

Although there are different ways in which affect can be conceptualised, a well-accepted distinction is between the two dimensions of positive affect and negative affect (Watson & Tellegen, 1985). *Positive affect* (PA) is a state that is characterised by highly activated positive emotions such as excitement and enthusiasm at the high end, and by the absence of such feelings (e.g., fatigue, lethargy) at the low end. In contrast, *negative affect* (NA) is characterised by highly activated negative feelings such as distress and nervousness at the high end, and by the absence of such feelings (e.g., calmness, serenity) at the low end.

PA and NA are the manifestations of two independent systems that represent different pathways through which affect mediates goal-directed behaviour. Functionally, these two systems mediate task-contingent conscientious responses by (a) signalling the significance of environmental events or situations to the individual (e.g., Larsen & Ketelaar, 1991), and (b) by guiding the individual’s response to those events or situations. In the present study, the situational cue that triggers affect is the demand level of the task the individual is performing.

*Task demand* is defined as the individual's perception of the level of demand that the task places on his or her psychological resources. This construct is closely related to other constructs in the literature, such as *task difficulty* (see Campbell, 1988) and *subjective task complexity* (Maynard & Hakel, 1997). Additionally to task difficulty, our operationalisation of task demand also includes its perceived urgency, as a task that may be otherwise easy to complete may require more psychological resources under time pressure. Our focus on the perceived demands of the task is consistent with the notion that affect arises from the individual's psychological interpretation of the situation rather than from its objective features (Lazarus & Folkman, 1984). Below, we first discuss how task demand may activate PA and NA, followed by a discussion of how affect activates conscientious behaviour.

### **Task Demand to Affect Linkages**

Appraisal theories of emotion (e.g., Lazarus & Folkman, 1984; see Moors, 2009) provide a theoretical rationale for how situational cues such as task demand activate PA and NA. Accordingly, the effects of situational cues on affective responses occur via evaluative processes in which an individual construes the situation in terms of its significance to them. The particular affective response elicited (if any) depends on how the situation is appraised. NA ensues when a situational cue is construed as signalling a threat or a potential loss, whereas PA ensues when a cue is construed as signalling a reward or a gain to be realised.

Applying appraisal theory to perceptions of task demand, the potential threat inherent in a task that is perceived as demanding is clear: The more demanding a task, the greater the likelihood that an individual will not be able to perform it successfully and therefore the greater the potential for being seen as a failure; this in turn is likely to evoke NA. In support of this assertion, task demand has been linked to NA in both experimental (e.g., Flynn & James, 2009) and experience sampling (e.g., Fisher & To, 2011) studies. Furthermore, task

demand may under certain circumstances be construed as a challenge and hence in terms of opportunities for gain. For example, according to Cavanaugh, Boswell, Roehling, and Boudreau’s (2000) notion of challenge stressors, work-related demands such as high workload, time pressure, task complexity and responsibility may be perceived as rewarding experiences that are associated with potential gains, including growth and mastery. In such circumstances, task demand is likely to activate PA. Thus, on average, task demand is expected to be positively related to both PA and NA (see Rodell & Judge, 2009; Widmer, Semner, Kälin, Jacobshagen, & Meier, 2011). We note that our argument does not necessarily imply that task demand evokes PA and NA *simultaneously*, although we also do not exclude this possibility (see Cacioppo, Gardner, & Berntson, 1999; Lazarus & Folkman, 1984).

**Affect to Conscientious Behaviour Linkages**

Affect-behaviour linkages occur directly, as well as indirectly via cognitive judgments (Seo et al., 2004). The mechanism that underlies the direct effect has been explained by the concept of *action readiness* (Frijda, 1986, 2007), according to which the experience of affect disrupts the individual’s (non-situation related) behaviour and prepares the person to behave in such a way as to deal with the perceived situation that generated the affect. At a general level (regardless of whether affect is positive or negative), this involves greater allocation of psychological resources to dealing with the situation, as reflected in the types of responses characteristic of conscientious behaviour (e.g., focus, striving, persistence; see Frijda, 2007).

Furthermore, depending on the nature of the affective state, specific *action tendencies* are activated (see Frijda, Kuipers, & ter Schure, 1989; also see Cacioppo et al., 1999; Carver, Sutton, & Scheier, 2000; Watson, Wiese, Vaidya, & Tellegen, 1999; for additional evidence and arguments about the motivational-behavioural systems associated with PA and NA). Action tendencies refer to states of readiness to produce behaviours that are organised to

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4 achieve a particular aim or intention, where the same aim may be pursued via alternative  
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6 concrete actions. The action tendencies associated with PA are organised around *approach*  
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8 behaviours that are aimed at realising the gains that are signalled by the situational or task  
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10 cue, and include moving toward the affect-eliciting situation or task and being absorbed by it  
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12 (see Frijda et al., 1989). Thus, PA that derives from high task demand is expected to activate  
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14 conscientious behaviour that is directed at mastering and successfully completing the task.  
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18 In contrast, the action tendencies associated with NA are organised around *defensive*  
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20 behaviours that are aimed at avoiding the threats signalled by the situational cue (Seo et al.,  
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22 2004). Such behaviours can include focusing of an individual's attention and energy on the  
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24 task at hand, and heightened persistence and systematic thinking in dealing with the task  
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26 (e.g., see Roskes, Elliot, Nijstad, & De Dreu, 2013). Although withdrawing and moving away  
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28 from the situation is also a common response (Fridja et al., 1989), NA emotions are more  
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30 likely to be associated with task engagement than withdrawal, especially if the latter is not  
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32 feasible (see Fontaine & Scherer, 2013). In the context of work tasks, the potential threats  
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34 associated with demanding tasks (e.g., missing tight deadlines, failing the task) may be  
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36 avoided via withdrawal when employees have choice over which tasks to perform and prior  
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38 to task engagement, however once the task is engaged and the individual is under time  
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40 pressure to complete it, it becomes difficult to withdraw without negative repercussions (e.g.,  
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42 loss of face). Thus, we expect that on average individuals will actively respond to such  
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44 threats, such that NA that derives from a demanding task that the individual is performing  
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46 will typically activate conscientious behaviour directed at avoiding poor task performance.  
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52 In sum, with respect to their direct effects, PA and NA are both expected to have  
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54 positive effects on conscientious behaviour on the task, even though the intentions underlying  
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56 conscientious behaviour (gain realisation versus loss avoidance) differ for the two. This is  
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consistent with conceptualisations of the conscientiousness construct, which is thought to include both proactive and inhibitive tendencies (see DeYoung, Quilty, & Peterson, 2007). In addition to direct effects, the effect of affect on conscientious behaviour may occur indirectly via proximal cognitive processes such as expectancies and goals. Based on a summary of the relevant literature, Seo et al. (2004) argue that positively-valenced affect (compared to negatively-valenced affect) leads to increased expectancies that one's actions are associated with positive outcomes, more positive judgments about the utility of those outcomes, and higher goal levels and goal commitment, all of which further increase task persistence and effort. Thus, although both PA and NA are expected to have positive effects on conscientious behaviour, the latter effects are more uncertain. Findings from the organisational literature generally support this assertion, in that they confirm the positive effect of PA at work though they yield mixed findings for the positive effect of NA (see Barsade & Gibson, 2007).

Taken together, the arguments presented in this section suggest mediated effects of task demand on conscientious behaviour via the PA and NA pathways. However, we do not expect that affect will fully account for the relationship between task demand and conscientious behaviour. Task effects on motivated behaviour may also occur either directly (e.g., Bargh & Gollwitzer, 1994) or via other non-affective variables (e.g., Bandura, 1977). Consequently, we hypothesise partial mediating effects via PA and NA:

- Hypothesis 1 (H1). PA partially mediates the effect of task demand on conscientious behaviour. More demanding tasks elicit greater PA which in turn lead to more conscientious behaviour.*
- Hypothesis 2 (H2). NA partially mediates the effect of task demand on conscientious behaviour. More demanding tasks elicit greater NA which in turn lead to more conscientious behaviour.*

### Individual Differences in the Mediating Effect of Affect

H1 and H2 describe two pathways through which the contingency of conscientious behaviour on task demand may be mediated. However, we do not expect that the two pathways are equally relevant for all individuals. As outlined above, the CAPS model predicts individual differences in the way and extent to which situational cues are connected to mental representations and mental representations to behavioural responses (see Mischel & Shoda, 1995). Such individual differences are presumed to at least partly reflect the different strategies that individuals have developed for adapting to the situation. For example, individuals may differ in the specific emotions they seek to experience in the context of demanding tasks: Some individual may seek to avoid NA and promote PA by reframing a demanding task in terms of the challenge and opportunities for gain inherent in such tasks; whereas others who perceive negative emotions as useful for goal attainment may increase their focus on the threat in order to increase NA (see Tamir, 2009). Similarly, the experience of PA and/or NA will not necessarily influence conscientious behaviour to the same extent across individuals. For example, researchers have distinguished between two groups of individuals, namely *defensive pessimists* and *depressives*, who both experience anxiety when dealing with demanding tasks; however, the two differ in that anxiety leads to disengagement for the latter group, whereas the former group harnesses their anxiety into higher levels of motivation (Norem & Cantor, 1986; Showers & Ruben, 1990). A third group of individuals labelled *optimists* do not experience the same level of anxiety as the defensive pessimists, although they do have similarly high levels of motivation in demanding situations.

Linville and Clark (1989) describe how the mediating processes that underlie situation-response contingencies for a given individual develop over time in the context of emotional issues. Specifically, when initially encountering a potentially emotional issue (such



as how to best address a demanding task) people use their declarative knowledge along with consciously controlled general problem solving procedures (e.g., analogical reasoning) to search for and implement strategies to deal with the situation. For example, a recently hired graduate who is assigned a difficult task by their new boss may draw on the fact that when previously performing demanding tasks at university (e.g., studying for exams) feeling anxious resulted in the graduate putting in more effort and staying focused on the task. Furthermore, the graduate may use their declarative knowledge about the regulation of anxiety (e.g., that having low expectations of success increases anxiety) to bring about the anxious state needed to motivate them to perform the task successfully. Over time, with repeated exposure to the situational cue, the individual’s emotional and behavioural response gradually becomes proceduralised such that it is automatically generated in the context of the cue without having to engage in the conscious application of the declarative knowledge.

Importantly, the specific connections between situational cues, cognitive-affective processes and behavioural responses do not develop in isolation for any given individual, but rather develop and operate in conjunction as a network that operationalises the individual’s strategy for coping with the situation (see Norem, 2008). Consequently, it is the pattern of interconnections in the network—rather than the magnitude and direction of any given connection—that determines the adaptiveness of the individual’s strategy. For example, a strong positive link between task demand and NA can be adaptive if NA is also positively related to conscientious behaviour, but maladaptive if the latter relationship is negative. Moreover, the same level of task-contingent conscientiousness may be achieved via separate strategies, as occurs when the effect is mediated via PA rather than NA. Accordingly, it is the *pattern* of interconnections in individual networks that is the basis for classifying individuals and conceptualising individual difference in the CAPS model (see Mischel & Shoda, 1995).

As a result, beyond demonstrating individual differences in the magnitude and direction of specific connections, the viability of the CAPS model as a nomothetic approach to personality rests on being able to demonstrate the existence of distinct classes or types of individuals that display similar and meaningful patterns of network interconnections within class. We test these assumptions as part of Hypotheses 3 and 4:

*Hypothesis 3 (H3). Individual differences occur in the interconnections between task demand, affect and conscientious behaviour. Specifically, people differ in the strength and/or direction of the: (a) task demand effect on PA, (b) PA effect on conscientious behaviour, (c) task demand effect on NA, (d) NA effect on conscientious behaviour, and (e) task demand direct effect on conscientious behaviour.*

*Hypothesis 4 (H4). Individual differences in the interconnections cohere to define classes of network patterns that represent meaningful differences in the ways and extents to which the overall effect of task demand on conscientious behaviour (i.e., task-contingent conscientiousness) is mediated affectively.*

With respect to the specific patterns of interconnections underlying TCC, the number and exact nature of classes is not known, and therefore we examine this on an exploratory basis. However, we offer the following initial speculations. First, a fundamental distinction exists in the coping literature (see Carver & Connor-Smith, 2010) and the literature on action readiness (Fontaine & Scherer, 2013) between engagement strategies that involve actively responding to situational stressors versus disengagement strategies that involve ignoring or withdrawing attention from stressors. Based on this distinction and previous findings on individual differences in TCC (Minbashian et al., 2010), we expect to broadly distinguish between classes of networks that are characterised by strong positively mediated effects (i.e., high levels of positive connections between task demand, affect and conscientious behaviour)

and classes that involve weaker, null or negatively mediated effects. Second, consistent with the distinction between optimistic versus pessimistic responses to situational stressors (e.g., Norem, 2008), and the two mediating pathways outlined above, we expect to distinguish between classes of networks that primarily involve mediation via the PA pathway versus classes that primarily involve mediation via the NA pathway.

**Emotional Intelligence and Individual Differences in the Mediating Effect of Affect**

A key proposition of the dynamic approach to personality is that the development of mediating pathways underlying situation-response contingencies is influenced by acquired knowledge structures that guide how individuals respond to situational cues (Cervone, 2004), and that become proceduralised over time with repeated exposure to the situational cue (see Linville and Clark, 1989). This suggests that individual differences in knowledge should at least partly account for individual differences in the mediating processes that underlie situation-response contingencies. Moreover, this framework implies that the provision of relevant knowledge, when combined with the opportunity to put this knowledge into practice through repeated exposure to the relevant situation, is one avenue through which effective situationally contingent responses can be learnt and ineffective ones replaced.

In the present paper we propose that emotional intelligence, as assessed by scales from Mayer et al.'s (2002) Emotional Intelligence Test (MSCEIT), is an index of knowledge that is relevant for the development of the affective mediating processes that underlie task-contingent conscientiousness. As originally conceptualised by Salovey and Mayer (1990), emotional intelligence comprises abilities related to processing affective information. However, various researchers have argued that the MSCEIT more specifically assesses an individual's *declarative knowledge* about emotions (e.g., Brody, 2004; Fiori, 2009; also see Joseph & Newman, 2010), including knowledge of the motivational and cognitive effects of

various affective states, how emotions transition over time, how they combine to form more complex affective states, and strategies that can be used to regulate ones affective states. This is consistent with the view that adult intelligence is largely underpinned by knowledge structures (e.g., Ackerman, 1996). Conceptualising emotional intelligence (at least as assessed by the MSCEIT) as a knowledge structure repositions it as a core variable within the dynamic approach to personality and leads to the prediction that emotional intelligence should be related to within-person appraisal processes (see Cervone, 2004). In this regard, there has been little research on how emotional intelligence maps on to the within-person processes through which affect mediates situation-behaviour contingencies.

Below, we argue that emotional intelligence is associated with networks that involve positive mediational effects via the PA and/or NA pathways. According to the instrumental approach to emotion regulation, people are motivated to use their emotions to help them attain their goals (Tamir, 2009). Consequently, to the extent that behaving conscientiously in response to task demands is useful, individuals should be motivated to develop positive PA and NA mediating paths. Such paths involve the conjunction of a positive task-demand to PA (or NA) connection with a positive PA (or NA) to conscientious behaviour connection. Individuals who score high on emotional intelligence are in a better position to develop such connections for several reasons. First, emotionally intelligent individuals have a greater understanding of how emotions operate, including their causes and consequences (Mayer, Caruso, & Salovey, 2016). Consequently, they are more likely to appreciate the role of affect in mediating the effects of situations on behaviour, and in redirecting attention and motivation for the purposes of completing demanding task (see Salovey & Mayer, 1990). Thus, they will be more motivated to develop such connections.

Second, emotionally intelligent individuals have greater knowledge about how to regulate the affective states they experience. Specifically, they do so by using their past experiences to build theories of the causes of their emotions, including the effect of appraisals, and using these as the bases of strategies to bring about particular affective states (see Salovey & Mayer, 1990). In this regard, emotionally intelligent individuals are better at setting appropriate emotion regulation goals, selecting appropriate emotion regulation strategies, and effectively deploying those strategies (Côté, 2014). Consequently, we expect that individuals who are highly emotionally intelligent are more likely to use their emotional knowledge to strengthen task demand to affect links where the corresponding affective state also links to conscientious behaviour.

Third, emotionally intelligent individuals are better at using their emotions to motivate focus and persistence on demanding tasks (Salovey & Mayer, 1990). The experience of affect and action readiness does not always lead to action (Frijda, 2007), but is moderated by cognitive factors. According to the affect-as-information processing model (Schwarz & Clore, 1983), affect most strongly influences actions when it is perceived as being directly relevant to the task being performed (see Gasper & Bramesfeld, 2006). In contrast, if the informational value of affect is discounted then the effects of affect are reduced. Consequently, individuals who have a rich and accurate knowledge base about affect and its effects on motivated behaviour—that is, individuals who are emotionally intelligent—should be better at translating affect into adaptive behaviour (see Fiori, 2009). Fiori (2009) has described this as occurring through a process in which the emotional knowledge inferred from past experiences is initially consciously processed, but then becomes automatized and activates behaviour habitually. In a similar vein, the strategic use of NA to increase motivation that is characteristic of defensive pessimism (Norem, 2008) is

likely to depend on knowledge of the causes and effects of affect. In sum, as individuals who score higher on the MSCEIT are likely to have more knowledge about the motivational benefits of affect in promoting conscientious responses in the context of demanding tasks, as well as knowledge of how to elicit such affective states and direct them towards task completion, these individuals are more likely to engage in strategies that lead to the development of positive mediational effects via the PA or NA pathway.

*Hypothesis 5 (H5). Emotional intelligence increases the likelihood of membership in classes that are characterised by positive mediational effects via the PA and/or NA pathways.*

## Method

### Data and Sample

To test our hypotheses, the present study draws on experience-sampling data collected during a two-year management training program. The participants were 201 mid-level managers (60% male; age:  $M = 34.44$  years,  $SD = 6.82$ ; management experience:  $M = 5.39$  years;  $SD = 4.74$ ) from five large organisations (an international airline, an insurance company, a broadcasting corporation, a packaging company, and a bank).

### Procedure

As part of the training program, managers attended 3-day residential modules approximately every six months. Additionally, they completed work-based training and development activities in between modules, including the three-week experience sampling activity reported in the present study. Within the first six months of joining the program (typically during the first module) participants completed individual difference measures, including the personality and emotional intelligence scales that are included in this study.

The experience sampling activity was introduced to participants during the second module and took place over three weeks during the second six months of the program (a small number of participants completed the activity over four weeks). Participants were provided with handheld computers that they carried with them over the three-week period. They received signals to complete the experience sampling questionnaires five times each work day between 9am and 7pm. The signals were spread across the day such that no two adjacent signals were less than one hour apart or more than three hours apart. Participants had a 30-minute window in which to respond to each signal. The final dataset comprised a total of 7,913 responses, corresponding to an average of 39.5 responses per person.

Measures

**Experience sampling questionnaire.** The questionnaire consisted of the four measures used in the present study, as well as other measures not reported here. Responses to each item were recorded on a 7-point scale ranging from 0 (labelled “not at all” or “none at all”) to 6 (labelled “extremely” or “a lot”). *Task demand* was assessed using two items. Participants were asked to rate the (i) difficulty and (ii) urgency of the task they were currently performing. *PA* and *NA* were each assessed with three items drawn from existing measures and conceptualisations of the constructs that load highly on their intended factor (see Revelle & Anderson, 1998). To assess *PA*, participants were asked to report how enthusiastic, attentive, and tired (reverse scored) they were feeling. *NA* was assessed with the items tense, stressed, and calm (reverse scored). *Conscientious behaviour* was assessed using four items. Participants were asked to think of the task they were performing and rate (i) how hard they were working on it, (ii) how efficiently they were working on it, (iii) how systematically they were working on it, and (iv) how focussed they were on the task. These

items broadly represent the various facets of conscientiousness, and have been used in measures of the construct (e.g., Huang & Bramble, 2016; Saucier, 1994).

We assessed the construct validity of the experience sampling measures at the within-person level via multilevel exploratory factor analysis of the 12 experience sampling items. We chose exploratory factor analysis over confirmatory factor analysis as items assessing conscientiousness (and other personality constructs) often have secondary loadings that are not captured by confirmatory factor analysis (see Marsh et al., 2010). The “working hard” item loaded primarily on the task demand factor (rather than the conscientious behaviour factor). This item was therefore removed in order to avoid distorted relationships between our measure of conscientious behaviour and the other variables. Factor analysis of the remaining 11 items indicated that each item loaded most strongly on the intended factor. Consequently, the items for each factor were averaged to derive measures of the four experience sampling constructs. Multilevel reliability analysis (Geldhof, Preacher, & Zyphur, 2014) was conducted to estimate the within-person Cronbach alpha coefficients for the four scales, taking into account the nested structure of the data. State measures are subject to two of the three sources of measurement error that contribute to low unreliability of trait measures—random response and specific factor errors, but not transient error (see Schmidt, Le, & Ilies, 2003). As both these sources of error are captured by measures of internal consistency reliability, the alpha coefficient provides an accurate account of reliability for state measures. The alpha coefficients were .60 for the task demand and PA scales, .78 for NA, and .77 for conscientious behaviour. Finally, the intraclass correlations (ICCs) for these four measures were calculated as .22 for task demand, .33 for PA, .39 for NA, and .25 for conscientious behaviour. These values indicate that the majority of variability in the experience sampling measures occurred within-person.



**Emotional intelligence.** Emotional intelligence was assessed using the (consensus-scored) scales of the MSCEIT (Mayer et al., 2002). The MSCEIT consists of 141 objectively scored test items that assess four branches of emotional intelligence (perceiving emotions, using emotions, understanding emotions, and managing emotions). The score on each branch is standardised against the norming sample ( $M = 100$ ,  $SD = 15$ ). In our study we calculated a composite of the latter three branches in order to assess an individual's level of emotional knowledge. The perceiving emotions branch is omitted as the corresponding test only assesses the ability to identify emotions in *external stimuli*, which is of less relevance to the present study's focus on internal processes. The reliability estimate of the composite was .88, derived by calculating stratified alpha using the internal consistency estimates for the three branches from the standardisation sample (see Mayer, Salovey, Caruso, & Sitarenios, 2003).

**Control variables: Traits conscientiousness, extraversion and neuroticism.**

Conceptually, it is plausible that task-contingent conscientiousness is associated with trait conscientiousness (see Minbashian et al., 2010). Furthermore, it has been argued that traits extraversion and neuroticism are indicative of individual differences in the sensitivities of physiological systems that mediate PA and NA respectively (e.g., Depue & Collins, 1999; Gomez & Cooper, 2008). As all three of these personality traits have previously been found to relate significantly to scales of the MSCEIT (e.g., Mayer, Salovey, & Caruso, 2004), and as we wish to demonstrate that emotional intelligence contributes to the development of affect-related mediating pathways independently of these traits, we controlled for their effects in our analyses. Traits conscientiousness, extraversion and neuroticism were assessed using the corresponding measures from the International Personality Item Pool version of the NEO Inventory (see Goldberg et al., 2006). Each measure consisted of ten items that were rated on a slider scale (anchored “strongly disagree” to “strongly agree”) that was converted to a score

from 0 to 100. The scores on the ten items for each measure were averaged to obtain measures of traits conscientiousness (Cronbach alpha = .86), extraversion (Cronbach alpha = .89) and neuroticism (Cronbach alpha = .86).

### Data analysis

To examine H1 to H3, we used the multilevel structural equation modeling (MSEM) procedure presented by Preacher, Zyphur, and Zhang (2010), implemented via the Mplus software. In this analysis, level 1 constitutes the occasion of measurement and level 2 constitutes the person. We estimated a 1-(1,1)-1 model in which the task demand is the independent variable, conscientious behaviour is the dependent variable, and PA and NA are mediators with correlated residuals. All intercepts and slopes were specified as random. H1 and H2 were tested by examining the within-person effects of task demand on NA and PA, and the within-person effects of PA and NA on conscientious behaviour. H3 was tested by examining the variability between people in each of the slopes (or paths).

To examine H4 and H5, individual slopes from the MSEM analysis were saved and used as indicators in a latent class analysis (using Mplus). Latent class analysis is a method for identifying hidden sub-populations from observed variables (Oberski, 2016). In the present study we use it to provide evidence in relation to H4 and to explore the number and nature of classes of network patterns that represent individual differences in how PA and NA mediate TCC. Various criteria are used to determine the number of classes, which we discuss below when reporting the results. Given five indicators, our sample size of 201 provides approximately 80% power for detecting underlying latent classes, assuming a “medium” effect size (see Dziak, Lanza, & Tan, 2014). Once the number of classes is determined, the nature of each class is interpreted by inspecting and comparing the mean scores on the indicator variables (in this case the slopes or paths). Finally, the different classes can be

considered as different levels of a latent categorical variable that itself can be used as an outcome that is predicted by other variables, a procedure known as latent class regression analysis (see Asparouhov & Muthen, 2013). The ‘3-step approach’ is a specific method advocated for conducting latent class regression analysis that accounts for the uncertainty in each observation’s class membership (Oberski, 2016). In the present paper we use this approach to examine the effect of emotional intelligence on class membership as a test of H5.

Results

Table 1 reports descriptive statistics, intercorrelations, and reliability coefficients for the study variables. The experience sampling variables were aggregated across the sampling occasions in calculating the correlation coefficient below the diagonal. Coefficients above the diagonal are within-person correlations.

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Insert Table 1 about here
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Hypotheses 1 and 2: Affect as a Mediator of Task Contingent Conscientiousness (TCC)

Figure 1 presents the results of the MSEM analysis in the form of a path diagram that captures the effects of task demand on PA and NA, and the effects of task demand, PA and NA on conscientious behaviour for the typical person. The fixed effect for each path appears above the corresponding arrow. Consistent with the proposed mediating role of PA (H1), task demand was associated with an increase in PA ( $b = 0.065, p < .01$ ) which in turn was associated with an increase in conscientious behaviour ( $b = 0.426, p < .01$ ). The mediating effect itself was also statistically significant (mediation effect = 0.030;  $p < .01$ ). In relation to the proposed mediating role of NA (H2), task demand was associated with an increase in NA

( $b = 0.394, p < .01$ ), however NA was not significantly related to conscientious behaviour ( $b = 0.020, p = .18$ ). Moreover, the mediation effect via NA was not significant (mediation effect =  $0.012, p = .05$ ). Finally, there remained a significant direct effect of task demand on conscientious behaviour ( $b = 0.197, p < .01$ ) after taking into account any mediating effects of PA and NA, which indicates partial mediation.

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Insert Figure 1 about here

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### Hypotheses 3 and 4: Individual Differences in the Mediating Effect of Affect

H3 predicts individual differences in the mediating paths that link task demand to conscientious behaviour. In support of this hypothesis, the variance of the slopes representing the effect of task demand on PA (variance = .019), the effect of PA on conscientious behaviour (variance = .031), the effect of task demand on NA (variance = .027), the effect of NA on conscientious behaviour (variance = .011), and the direct effect of task demand on conscientious behaviour (variance = .015) were all statistically significant ( $p < .01$ ). We calculated 95% credibility intervals (CV) to ascertain the plausible range of slopes for each effect. These are depicted below each corresponding arrow in Figure 1. The 95% CVs for the task demand-PA slope (-.21 to .34) and the NA-conscientious behaviour slope (-.19 to .23) include zero, suggesting that, even though most individuals have positive or null slopes, some individuals display decreased PA in response to task demand and/or decreased conscientious behaviour in response to NA. The 95% CVs for the task demand-NA slope (.07 to .72) and the PA-conscientious behaviour slope (.08 to .77) suggest that these effects are positive across people, although in both cases the effects are approximately ten times stronger at the upper extreme than at the lower extreme. Finally, the 95% CV for the task demand-

conscientious behaviour slopes indicates that the vast majority of individuals have null or positive slopes. Taken together, these results provide support for H3.

The results of the latent class analysis inform H4 by examining the extent to which individual differences in the paths cohere to define classes of network patterns that represent meaningful individual differences in the mediating effects of PA and NA. In order to determine the number of classes we were guided by various statistical indicators as well as by the theoretical interpretability of the classes. Although there is no single statistical indicator that is considered the best, the Bayesian Information Criterion (BIC) and bootstrap likelihood ratio test (BLRT) have been shown to work well in practice (Nylund, Asparouhov, & Muthen, 2007). The former is also the most commonly used selection method (Tein, Coxe, & Cham, 2013). The BLRT did not yield a solution for our dataset, and in such situations it has been suggested to determine the number of classes based on the BIC and substantive interpretation (B. O. Muthen, 2014, March 4). BIC progressively improved as the number of classes increased (1-class: BIC = -1598.07; 2-class: BIC = -1672.08; 3-class: BIC = -1700.03; 4-class: BIC = -1712.69) with peak values obtained for the 5-class (-1722.61) and 6-class (-1722.17) solutions, and decreases in BIC thereafter. Furthermore, entropy values (which assess classification quality) for the 5-and 6-class models were both above .80 (.87 and .85 respectively), indicating adequately high levels of class separation (see Tein et al., 2013). Finally, both models yielded classes that could be substantively interpreted, however the 6-class model identified an additional meaningful class. Consequently, we focus on the 6-class model, although we note that the pattern of significant findings in relation to H5 was the same for the 5- and 6-class models.

Table 2 presents the mean scores on the indicator variables (the path coefficients) for each class in the 6-class model. The Table also presents the mean PA and NA mediation

effects and the mean TCC value for each class (which we derived by calculating individual values and averaging across individuals in each class). The largest class, comprising 53% of the total sample, displayed the typical pattern of path coefficients described above. Specifically, these individuals—labelled *Typicals*—experienced higher levels of PA and NA in response to task demand, but only PA mediated the effect on conscientious behaviour. The second class, comprising 17% of the total sample, were defined by stronger than average links across both PA and NA mediating paths as well as through the direct effect of task demand on conscientious behaviour. These individuals—labelled *Responsive Allrounders*—had the highest overall levels of TCC.

The third and fourth classes, respectively comprising 14% and 8% of the sample, were both characterised by lower (or negative) effects across the mediating paths, and had the lowest overall levels of TCC. These two classes, which were collapsed into one in the 5-class model, were labelled *Stables* to reflect the fact that their conscientious behaviour showed little variability as a function of task demand (i.e., low TCC), both due to a lack of affect-related mediation and a small direct effect of task demand. However the two groups differed in the reasons for their low TCC. One group (Class 3 in Table 2) displayed weaker effects of task demand on PA and NA, and negative NA-conscientious behaviour effects. We refer to these individuals as *Stable Disengagers*: Although they disengage from the task in response to increases in NA, this has little effect on their TCC due to their lack of affective responsiveness to task demand. The second group (Class 4 in Table 2) is chiefly characterised by the fact that PA decreases in response to task demand, resulting in a negative mediating effect of PA. Furthermore, NA increases relatively strongly. Thus, in contrast to the Stable Disengagers, this class demonstrates a stronger and more pessimistic affective response to

task demand. However, NA is not associated with disengagement in this class, and the overall level of TCC remains low. We refer to this class as *Stable Pessimists*.

Finally, classes five and six comprised individuals who were highly responsive to task demands, although (unlike the Responsive Allrounders) mediation only occurred across one of the two affective pathways. Class five (5% of the sample) consisted of individuals who had the strongest links across the NA pathway. Specifically, of the six classes, the individuals in this class were the most likely to experience NA in response to task demand, and the most likely to convert their NA into conscientious behaviour. Consequently, they were labelled *Responsive Pessimists*. Although these individuals also displayed strong links between PA and conscientious behaviour, task demand was typically unrelated to PA for these individuals, and therefore mediation did not occur via the PA pathway. In contrast, in the sixth class (3% of the sample), mediation occurred exclusively and strongly via the PA pathway. Unlike the other responsive groups, these individuals were characterised by lower than average effects of task demand on NA, and negative NA-conscientious behaviour effects. Furthermore, these individuals displayed particularly strong PA responses to task demand compared to the other groups, and were therefore labelled *Responsive Optimists*.

Insert Table 2 about here

**Hypotheses 5: Emotional Intelligence as a Predictor of Individual Differences in the Mediating Effect of Affect**

Table 3 presents the results of the latent class regression analysis, which examines the effect of emotional intelligence on class membership for the 6-class model, controlling for traits neuroticism, extraversion, and conscientiousness. The Typical class is used as the

reference category against which the other classes are compared. H5 predicts that an increase in emotional intelligence will be associated with an increase in the likelihood of membership in classes in which the positive mediation effects of PA and/or NA are strong. This corresponds to the three Responsives classes identified in the 6-class models. As can be seen in Table 3, Hypothesis 5 was partially supported. An increase in emotional intelligence increased the likelihood of membership in the Responsive Allrounders class ( $b = 0.068, p = .02$ ) and the Responsive Pessimists class ( $b = 0.148, p = .03$ ) relative to the Typical. However the effect for Responsive Optimists was non-significant.<sup>1</sup>

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Insert Table 3 about here

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Finally, to examine the extent to which the findings for emotional intelligence are due to the unique variance associated with specific dimensions of emotional intelligence, we conducted analyses in which the effects of the three EI dimensions (rather than the aggregate of the three dimensions) were examined simultaneously. None of the specific dimension effects was statistically significant, which may suggest that it is the common variance underlying the dimensions rather than their unique variance that is driving the effects.

## Discussion

After decades of focusing almost exclusively on relatively fixed personality traits such as the Big Five (e.g., Barrick et al., 2001), organisational researchers of personality have

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<sup>1</sup> As pointed out by an anonymous reviewer, cognitive ability should also be controlled, given its links to knowledge acquisition and emotional intelligence. We were able to obtain access to scores on Raven's Progressive Matrices (RPM; a measure of cognitive ability) for 186 individuals in our sample. Controlling for RPM and the other traits, the pattern of findings was unchanged: emotional intelligence remained positively related to membership in the Responsive Allrounders ( $b = 0.069, p = .04$ ) and Responsive Pessimists classes ( $b = 0.148, p = .02$ ), whereas cognitive ability was not significantly associated with membership in any class.



recently started to investigate dynamic units as the basis for describing and studying personality in the workplace (Huang & Ryan, 2011; Judge et al., 2014; Minbashian et al., 2010). The present study contributes to this literature by examining the affective processes that underlie one such construct, task-contingent conscientiousness. Our findings indicated that (a) for the typical person, PA (but not NA) mediated the relationship between task demand and conscientious behaviour; (b) individuals differed from each other substantially in the extent to which the PA and NA pathways mediated task-contingent conscientiousness; (c) individuals could be classified into one of six different classes or types based on the pattern of their mediating connections; and, (d) emotional intelligence increased the likelihood of classification in types defined by strong affective mediation, especially via NA.

**Theoretical Implications**

We discuss the implications of our findings for (a) the viability of the CAPS model as a framework for studying personality at work; (b) research on the consequences of affect in the workplace, in particular its role in facilitating task-contingent conscientiousness; and (c) the MSCEIT model of emotional intelligence.

First, the findings provide evidence that is key for extending the CAPS model (Mischel & Shoda, 1995) to the workplace. According to the CAPS model, a complete conceptualisation of personality goes beyond individual differences in traits, to also include differences in how individuals vary their responses across situations, individual differences in the psychological processes that mediate such effects, and the organisation of such individual differences in terms of distinctive person types. Evidence that conscientious responses at work vary as a function of task characteristics has been provided previously (e.g., Huang & Ryan, 2011; Minbashian et al., 2010). In this study we provide insight into the psychological processes that underlie task-contingent conscientiousness, and the resulting person types,

demonstrating that for many but not all managers affective processes at least partly account for why conscientious behaviour varies across the tasks they perform at work. Our study is, to our knowledge, the first to demonstrate *individual differences* and *person types* in the mediating affective processes that underlie task-contingent conscientiousness. That is, individuals differ in the extent to which affect mediates their responses, and such differences partly account for why individuals differ in their levels of task-contingent conscientiousness. Moreover, our finding that emotional intelligence is related to networks with stronger affective mediational paths (controlling for relevant Big Five traits) is consistent with the CAPS model notion that the mediating systems are underpinned by knowledge structures, as opposed to merely reflecting the effects of traits. Together, these findings support the future application of the CAPS model as a framework for examining personality in the workplace.

Our findings are also relevant for the literature on affect in the workplace. Following the seminal work of Weiss and Cropanzano (1996), a multitude of studies have considered the consequences of affective experiences for motivated behaviour at work (e.g., Barsade & Gibson, 2007; Beal, Weiss, Barros, & MacDermid, 2005; Seo et al., 2004). The outcomes with respect to PA are clear: “The evidence is overwhelming that experiencing and expressing positive emotions and moods tends to enhance performance at individual, group, and organizational levels” (Barsade & Gibson, 2007, p.51). Our results are consistent with this conclusion, in that PA was positively associated with conscientious behaviour, and this effect generalised across individuals. However, previous research on the effects of NA have yielded mixed findings, which has led researchers to call for more studies on the conditions under which NA facilitates positive outcomes (e.g., Barsade & Gibson, 2007). Our finding that NA is positively related to conscientious behaviour for some but not all people suggests that it may be as much a case of for whom NA has positive outcomes (i.e., the person as a

moderator) as the conditions under which such effects occur (also see Beckmann, Wood, & Minbashian, 2010; Totterdell, 1999).

The six classes of networks identified in the present study provide further insights into individual differences and similarities in the affective processes and strategies that underlie motivated behaviour at work. Consistent with the distinction between engagement versus disengagement coping strategies (Carver & Connor-Smith, 2010) and action tendencies (Fontaine & Scherer, 2013), we were able to differentiate between classes of networks that represent high levels of TCC (the three Responsive classes and the Typical) and classes that represent low TCC (the two Stable classes). The high TCC classes were characterised by substantive connections across the mediating affective pathways, whereas affective pathways were largely absent among low TCC classes; this further supports the role of affect in TCC. The most common pattern is one where mediation occurs via PA but not NA, as indicated by the Typical class, and (more extremely) by the Responsive Optimists class. However, in line with previous findings that pessimism and optimism represent independent constructs that may co-exist (e.g., Benyamini, 2005), the two pathways are not mutually exclusive. Indeed, the highest level of TCC occurred among the Responsive Allrounders, for whom both pathways were present. Also, consistent with previous finding on the defensive pessimistic coping strategy (e.g., Norem & Cantor, 1986), we identified a class of people (Responsive Pessimists) who exclusively and strongly experienced task demand in terms of NA, but for whom this was adaptive due to the strong link between NA and conscientious behaviour.

There are two additional features of the present study with respect to the effect of affect that need to be noted. First, affect was assessed in relation to the task being performed. Affect that derives from the task generates attentional pull towards the task, whereas affect that is incidental to the task may hamper performance by creating attentional demands that

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4 take people off task (Beal et al., 2005). Consequently, the latter is more likely to lead to task  
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6 withdrawal. Second, we examined the total effect of affect. However, it is likely that part of  
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8 the total effect is mediated via more proximal determinants such as expectancies, utility  
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10 judgments, goal levels, goal commitment, and regulatory focus, some of which may have  
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12 effects that are opposite in direction to the direct effect of affect (see Seo et al., 2004). A  
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14 future study is needed to further dissect the direct and indirect effects of affect.  
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18 Our final theoretical implication concerns Salovey and Mayer's (1990) model of  
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20 emotional intelligence upon which the MSCEIT is based. Over the past two decades  
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22 emotional intelligence, and the MSCEIT measure in particular, has attracted increasing  
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24 research attention within the field of management. Recent meta-analytic evidence suggests  
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26 that the MSCEIT measure predicts job performance even when personality and cognitive  
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28 ability are taken into account (O'Boyle, Humphrey, Pollack, Hawver, & Story, 2011),  
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30 especially for jobs that involve high levels of emotional labour (Joseph & Newman, 2010).  
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32 Yet little is known about the mechanisms that underlie these effects (Fiori, 2009). The present  
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34 study suggests one possible mechanism through which this occurs; specifically, individuals  
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36 who score higher on the MSCEIT are better able to generate and use affect to motivate  
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38 conscientious behaviour in response to demanding work tasks. We interpret this result as  
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40 reflecting the individual differences in emotional knowledge that is captured by the MSCEIT:  
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42 The extent and accuracy of individuals' knowledge of the causes, content and consequences  
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44 of emotions provides differential opportunities to draw on this knowledge to generate  
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46 adaptive responses (see Fiori, 2009). However we are not implying that individuals always  
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48 consciously process this knowledge when they respond to demanding tasks. Rather, with  
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50 practice the response may become automatized such that it is performed with little reference  
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52 to one's declarative knowledge (Fiori, 2009). Moreover, by conceptualising emotional  
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intelligence as a knowledge structure, our study provides a direct link between emotional intelligence and social-cognitive theories that underlie the dynamic approach to personality, such as the CAPS model (see Cervone, 2004). Emotional intelligence has traditionally been studied with little regard to social cognitive processes (Fiori, 2009), yet consideration of such processes has recently been highlighted as an important area for future research on emotional intelligence in the management literature (Ybarra, Kross, & Sanchez-Burks, 2014).

**Practical Implications**

The main practical implication of the present study relates to the use of personality assessment for developmental purposes. Personality assessment (especially the Big Five personality traits) is now commonly used as an aid to bring about behavioural change in the workplace, for example in the context of coaching for leadership development (McCormick & Burch, 2008). Supplementing the use of such trait measures with the types of contingent personality units and person type variables identified in the present study is likely to provide a richer picture of the individual; one that captures not just how an individual typically behaves, but also the processes that underlie their behaviour, thus providing clues to the types of strategies that will most likely bring about desirable behavioural change for that person.

As an illustration, one can consider two individuals in the present study, one of whom was classified as a Responsive Pessimist and the other as a Responsive Optimist. Both individuals were low in terms of their average level of conscientious behaviour (bottom quartile) but high in terms of their task-contingent conscientiousness (top quartile). Simply assessing their typical level of conscientious behaviour reveals a deficit, without identifying the source of the deficit. If this information were supplemented with information about their level of task-contingent conscientiousness it would then become clear that both individuals are particularly prone to low conscientious behaviour when performing low demand tasks,

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4 but otherwise behave relatively conscientiously. This information could then be used by the  
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6 person or their manager to structure their environment in a way that promotes higher levels of  
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8 conscientious behaviour (e.g., by imposing deadlines). For other individuals, conscientious  
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10 behaviour may not be sensitive to task demand, but to other situational cues such as task  
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12 support or task importance. Assessing such cues would allow a profile of situational triggers  
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14 to be determined for each person, thus providing various strategies for influencing  
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16 conscientious behaviour. Moreover, contingent units may themselves be diagnostic of  
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18 limitations that need to be addressed. For example, an individual who fails to vary their  
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20 conscientious behaviour across levels of task importance may have a weakness in terms of  
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22 prioritising important tasks over less important ones.  
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27 Information about the mediating pathways underlying contingent units would also be  
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29 useful for facilitating behavioural change. Despite similar levels of task-contingent  
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31 conscientiousness, the two illustrative individuals differ markedly in their mediating  
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33 pathways, and this has implications for the types of strategies that are likely to be useful. For  
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35 example, attempting to down-regulate NA associated with a demanding task is likely to  
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37 adversely affect conscientious behaviour for the Responsive Pessimist, as NA is the primary  
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39 pathway through which conscientious behaviour is generated for such individuals. In  
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41 contrast, down-regulation of NA is likely to increase the conscientious behaviour of  
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43 Responsive Optimists for whom NA is negatively related to conscientious behaviour.  
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45 Moreover, the latter type is more likely to benefit from strategies that promote PA.  
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50 Finally, we note that the mediating pathways that characterise different person types  
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52 represent an aspect of personality at a *given stage in time* and that according to the CAPS  
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54 model the connections themselves may be modified over time through the acquisition and  
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56 proceduralisation of knowledge. For example, providing the Responsive Pessimist with  
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relevant knowledge and strategies for responding more enthusiastically to demanding tasks, and the opportunity to practice these strategies, may over time result in a stronger connection between task demand and PA for such individuals. Thus, mediation via PA would also occur, given the strong connection between PA and conscientious behaviour for this type.

**Limitations and Future Research**

The most prominent limitation of our study relates to the *correlational* nature of the data, which precludes definitive statements about the *causality* of the effects. Causality in our model is implied at two different levels. At a *within-person level*, task demand is depicted as antecedent to affect which in turn is antecedent to conscientious behaviour. However, it may be that some of these effects occur in reversed causal order (e.g., an individual may take on more demanding tasks when they have higher PA). Nevertheless, the possibility of reciprocal interactions notwithstanding, we note that experimental studies have shown that task demand manipulations do influence affect (e.g., Flynn & James, 2009), and that affect manipulations influence responsible work behaviour (e.g., Isen & Reeve, 2005). At a *between-person level*, emotional intelligence (conceptualised as a knowledge structure) is assumed to be causally antecedent to the development of affective mediating pathways. To this end, we controlled for the main (though not all) individual difference variables that could potentially confound the effect of emotional intelligence. A future study could more directly test claims about causality by using a design in which individuals either are (treatment group) or are not (control group) provided with relevant emotional knowledge and with the opportunity to put this into practice (i.e., repeated exposure to relevant situational cues), and the effects evaluated with respect to changes in the mediating pathways across time.

Second, latent class analysis, as used in the present study, is an exploratory data-driven technique. Our exploratory approach is driven by the lack of a compelling theoretical

framework to guide expectations about the exact number and nature of classes, much like the initial work that resulted in the Big Five model of personality (see Goldberg, 1993). In this respect, the research is in line with the call for more inductive research in management (e.g., Locke, 2007). Nevertheless, a drawback of this approach is that it entails comparing the fit of a series of models to the sample, and therefore increases the likelihood of capitalisation on chance. That is, one may select a model that fits the idiosyncrasies of the studied sample, but that does not generalise to the population. Moreover, some of the classes identified in the present study contained a relatively small number of cases, and are therefore prone to sampling error in the estimates of the parameters. Consequently, it is important that future research seek to validate these findings and assess the generalisability of the classes using samples that are at least as large as the present sample. To the extent that the current sample is moderate in size, it may be that using a larger sample will reveal more classes than were detected in the present study (see Yang, 2006).

Third, due to the intensive nature of the experience sampling (5 samples collected per day) we were limited to using short (2-4 item) measures of the within-person (i.e., state) constructs of interest, all of which were based on self-report. This is a common limitation of experience sampling studies, in which administration of long measures or collection of online objective data is not feasible, and it warrants replication of our findings across other measures and methods of assessing these constructs.

Beyond these limitations, further work is required to explicate the functional forms, antecedents, and consequences of contingent personality units. First, with few exceptions, studies to date have examined linear relationships among situational cues and cognitive, affective, and behavioural responses. Future research will need to consider theoretical arguments and empirical evidence for different functional forms, especially given recent



nonlinear findings (see Hofmans, Debusscher, Dóci, Spanouli, & De Fruyt, 2015). Second, the nomological networks of contingent personality units need further examination, especially in relation to their trait counterparts. Although contingent personality units are conceptually distinct from their corresponding traits (Minbashian et al., 2010), it is important to know how and to what extent the two types of units map on to each other. For example, the present study did not find evidence that trait neuroticism and trait extraversion are related to the NA and PA pathways, respectively, however these pathways may map on to the more specific traits of positive affectivity and negative affectivity. Another possibility is that the two mediating pathways relate to the distinct *proactive* versus *inhibitory* aspects of trait conscientiousness, respectively (see DeYoung et al., 2007). Similarly, research is required to examine the work-related consequences of contingent units and person types. Given the lack of association between the Responsive Optimistic type and any of the individual difference variables in the present study, an intriguing consideration is whether this class is predictive of outcomes on conceptually-related criteria (such as transformational leadership; see Bono & Judge, 2004) that is not accounted for by traditional individual difference measures.

Finally, research is required to evaluate the utility of the practical implications outlined in the paper. Assessing contingent units and person types via experience sampling is time-consuming and resource-intensive. Consequently, evidence is required that assessing and providing employees with such information facilitates behavioural to a greater extent than simply using traditional trait measures. This could be achieved by conducting an intervention study in which developmental feedback and/or coaching is delivered with traditional trait assessments only (control group) or with both trait and contingent unit/person type assessments (treatment group), with long term follow-up with respect to changes in behaviour and outcomes on the job.

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Table 1

Descriptive Statistics, Correlations and Reliability Coefficients

Variable	M	S.D.	1	2	3	4	5	6	7	8
1. Task Demand	2.49	0.77	(.60)	.10**	.51**	.32**				
2. Positive Affect	3.86	0.69	-.24**	(.60)	-.14**	.45**				
3. Negative Affect	1.87	0.86	.54**	-.63**	(.78)	.12**				
4. Conscientious Behaviour	3.99	0.62	.02	.67**	-.40**	(.77)				
5. Emotional Intelligence	97.88	8.36	-.05	.08	-.11	.12	(.88)			
6. Trait Neuroticism	31.87	14.87	-.07	-.26**	.33**	-.18*	-.12	(.89)		
7. Trait Extraversion	61.02	16.08	.13	.14*	-.21**	.09	.02	-.43**	(.86)	
8. Trait Conscientiousness	70.05	13.91	.06	.08	-.16*	.18*	.07	-.40**	.19**	(.86)

Alpha reliability coefficients are on the diagonal. The reliability coefficients for the experience sampling measures are within-person reliabilities. N = 201 for between-person correlations (below the diagonal); N = 7,913 for within-person correlations (above the diagonal).

\*  $p < .05$

\*\*  $p < .01$ .

Table 2

Mean Scores on the Indicator Variables for Each Class in the 6-Class Model<sup>a</sup>

Class	N (%)	Indicator (Path) Means					Mediation Effect Means		TCC
		TD-PA	PA-CB	TD-NA	NA-CB	TD-CB	PA Pathway	NA Pathway	
Typicals	106 (53%)	0.07	0.41	0.42	0.02	0.20	0.03	0.01	0.23
Responsive Allrounders	34 (17%)	0.16	0.52	0.41	0.06	0.35	0.09	0.03	0.47
Stable Disengagers	29 (14%)	0.01	0.34	0.26	-0.05	0.09	0.00	-0.01	0.07
Stable Pessimists	16 (8%)	-0.09	0.39	0.44	0.03	0.06	-0.04	0.01	0.02
Responsive Pessimists	10 (5%)	-0.02	0.61	0.52	0.17	0.24	-0.01	0.09	0.31
Responsive Optimists	6 (3%)	0.32	0.34	0.22	-0.07	0.32	0.11	-0.01	0.42

TD = task demand, PA = positive affect, NA = negative affect, CB = conscientious behaviour, TCC = task contingent conscientiousness

Table 3

## Results of the Latent Class Regression Analysis

	Class 2 (RA)		Class 3 (SD)		Class 4 (SP)		Class 5 (RP)		Class 6 (RO)	
Predictor	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
Intercept	-11.317**	3.785	-6.234	4.262	-8.863*	3.483	-18.301*	7.21	-3.802	6.396
Neuroticism	0.031	0.019	0.008	0.023	0.047	0.018	0.019	0.047	-0.061	0.033
Extraversion	0.047*	0.021	0.006	0.020	0.066**	0.024	0.028	0.038	-0.011	0.024
Conscientiousness	-0.007	0.015	0.047	0.030	0.027	0.034	-0.020	0.034	0.034	0.028
Emotional intelligence	0.068*	0.030	0.011	0.031	-0.005	0.046	0.148*	0.066	0.007	0.058

Coefficient estimates represent the change in the log of the odds of being in that class relative to the reference class, associated with a one unit increase in the predictor. The reference class is Class 1 (Typicals). RA = Responsive Allrounders, SD = Stable Disengagers, SD = Stable Pessimists, RP = Responsive Pessimists, RO = Responsive Optimists

\*  $p < .05$

\*\*  $p < .01$ .

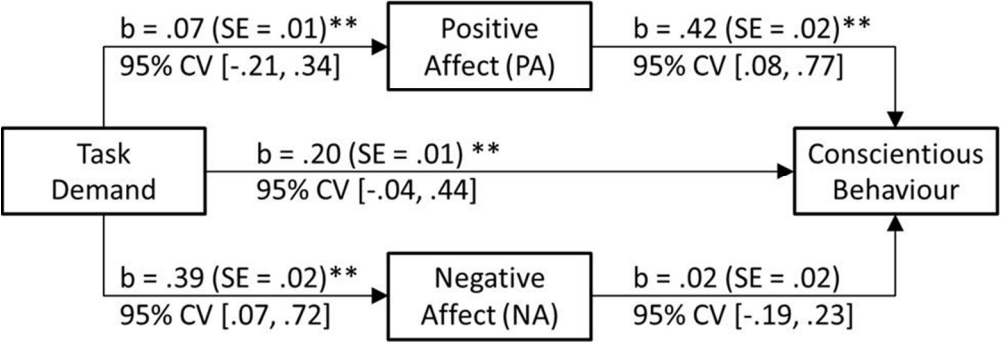


Figure 1: Path Diagram Depicting Results of the Multilevel Structural Equation Modeling Analysis. Note: b values (unstandardised path coefficients) and standard errors (SE) appear above each arrow. 95% credibility intervals (CV) represent the plausible range of individual differences for each path. \*\* p < .01.

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